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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/883,021	06/15/2001	Yingqin Jiang	1101.015	9701

7590 11/17/2003
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EXAMINER

NGUYEN, THANH T

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/883,021

Applicant(s)

JIANG ET AL.

Examiner

Thanh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 8/19/03 have been fully considered but they are not persuasive.

Claim Objections

Claim 1 is objected to because of the following informalities: there is a typographical error in claim 1, line 2, the limitation "onee" should be replace with --one--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-6, 11,13-15, 18-19, 24-25, 27, 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Willett et al. (U.S. Patent No. 5,325,218).

Referring to figure 2, Willett et al. teaches a reflective liquid crystal display comprising:

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A cholesteric liquid crystal polarizing device (12a, see col. 3, lines 30-37) including at least one multiple domain structure (see col. 4, lines 3-6), a liquid crystal cell (20), and an internal quarter-wave retarder (30), the cholesteric liquid crystal polarizing device, the liquid crystal cell, and the quarter-wave retarder being super posed with one another. The cholesteric liquid crystal polarizing device includes a plurality of pixel region are arranged in a repeating array of red pixels, green pixels and blue pixels reflecting circularly polarized red light, the green pixels reflecting circularly polarized green light, the blue pixels reflecting circularly polarized blue light (see col. 3, lines 30-45, col. 4, lines 23-33, claim 1, and related text).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willett et al. (U.S. Patent No. 5,325,218).

Referring to figure 2, Willett et al. teaches a reflective liquid crystal display comprising:

A cholesteric liquid crystal polarizing device (12a, see col. 3, lines 30-37) including at least one multiple domain structure (see col. 4, lines 3-6), a liquid crystal cell (20), and an internal quarter-wave retarder (30), the cholesteric liquid crystal polarizing device, the liquid

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crystal cell, and the quarter-wave retarder being super posed with one another. The cholesteric liquid crystal polarizing device includes a plurality of pixel region are arranged in a repeating array of red pixels, green pixels and blue pixels reflecting circularly polarized red light, the green pixels reflecting circularly polarized green light, the blue pixels reflecting circularly polarized blue light (see col. 3, lines 30-45, col. 4, lines 23-33 and claim 1).

However, the reference does not teach reflective liquid crystal display includes a normally white, black mode device, liquid crystal cell is disposed adjacent to a tin film transistor array having a plurality of pixel regions, forming an alignment layer.

It is known in the LCD art to have the normally white mode in which there is low attenuation in the absence of an applied field and a normally black mode in which there is high attenuation in the absence of an applied field. The thin film transistor array having a plurality of pixel regions would prevent cross talk. It is also known in the art to from an alignment layer in LCD to prevent misalign.

Therefore, it would have been obvious to a person of ordinary skill in the requisite art at the time of the invention was made would form reflective liquid crystal display includes a normally white, black mode device, liquid crystal cell is disposed adjacent to a tin film transistor array having a plurality of pixel regions, forming an alignment layer in the Willet process because the process is known in the LCD art.

Response to Arguments

Applicant's arguments filed 8/19/03 have been fully considered but they are not persuasive.

Applicant contends that none of the prior art taught or suggested a method of a cholesteric liquid crystal polarizing device including at least one multiple domain structure. In response to applicant that Willet teaches a cholesteric liquid crystal polarizing device (12a, see col. 3, lines 30-37) including at least one multiple domain structure (see col. 4, lines 3-6).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Nguyen whose telephone number is (703) 308-9439, or by Email via address Thanh.Nguyen@uspto.gov. The examiner can normally be reached on Monday-Thursday from 6:00AM to 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, can be reached on (703) 308-4940. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956 (See **MPEP 203.08**).



Thanh Nguyen
Patent Examiner
Patent Examining Group 2800